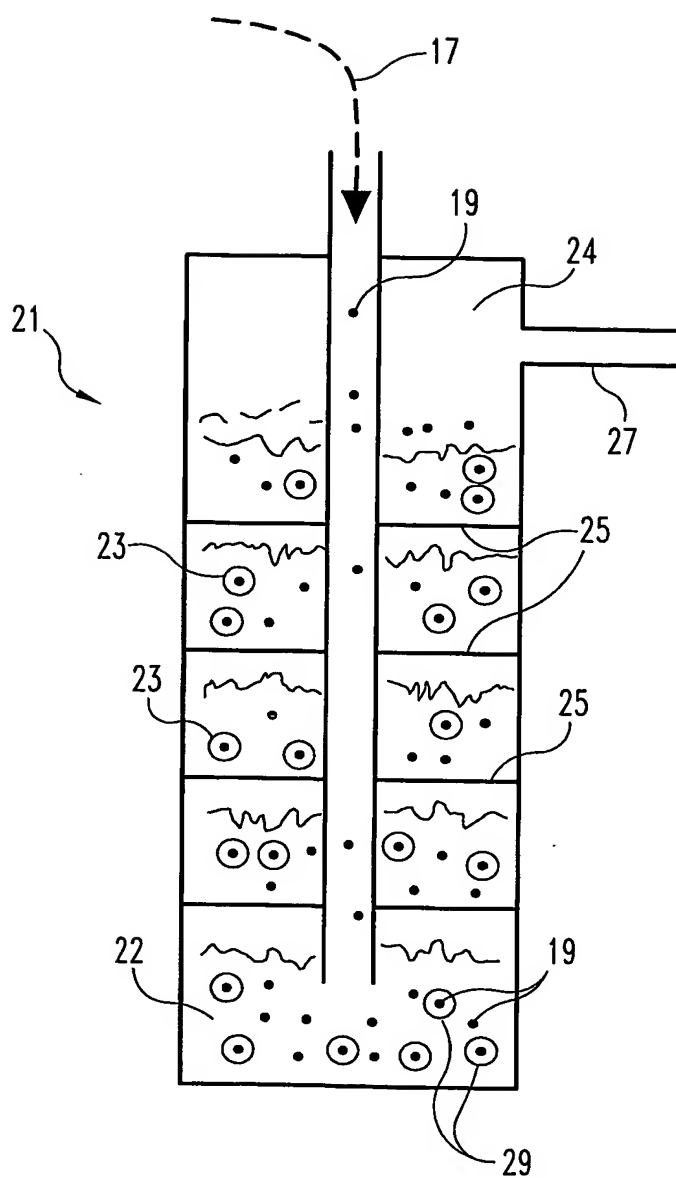
**Fig. 1**

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**Fig. 2**

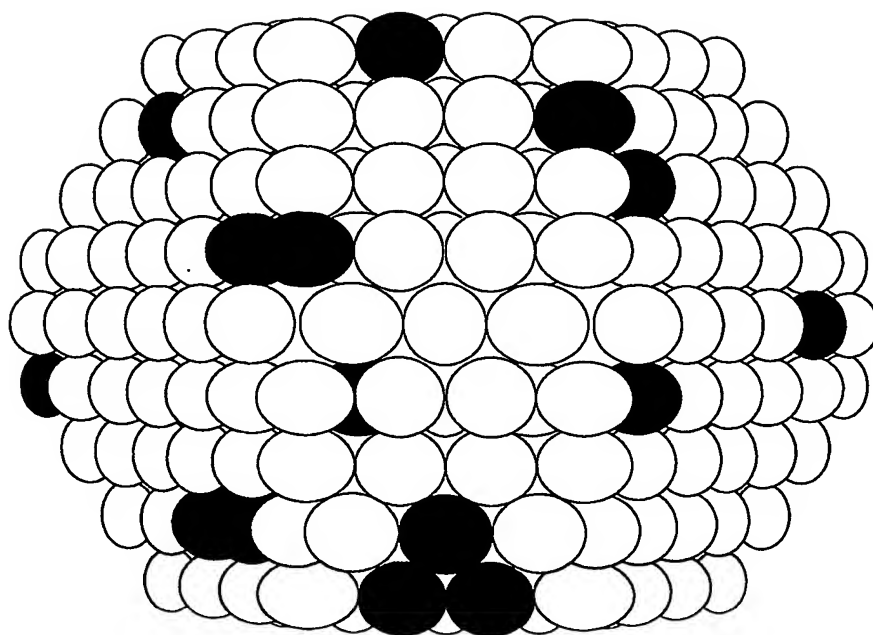
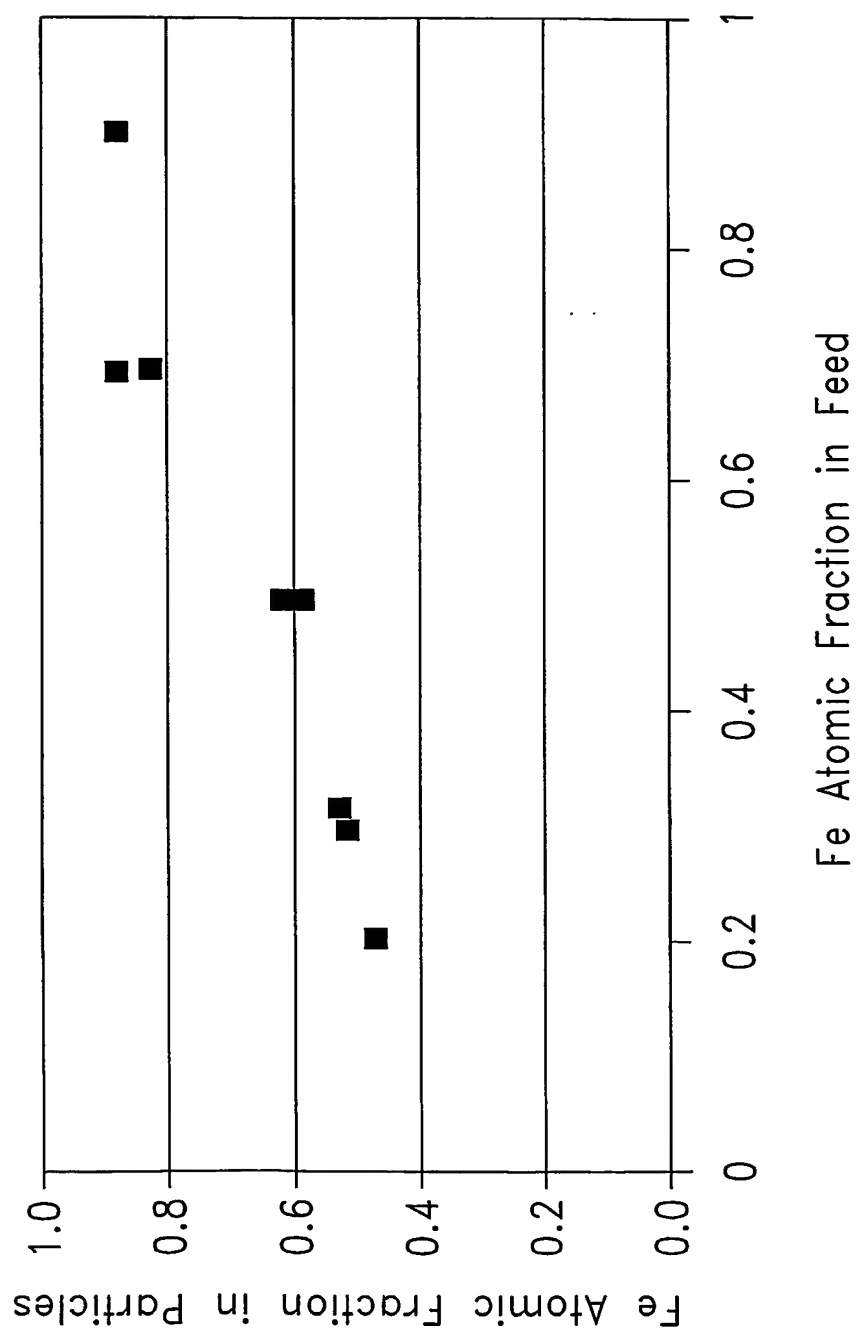


Fig. 3

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**Fig. 4**

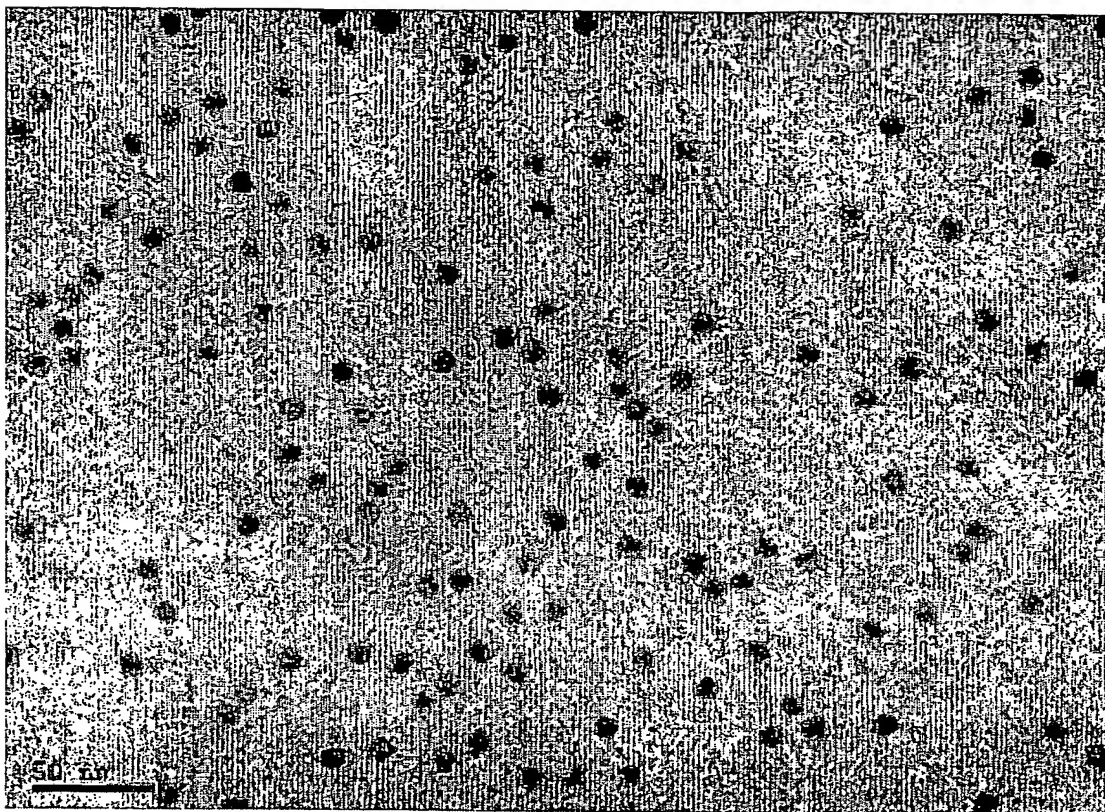
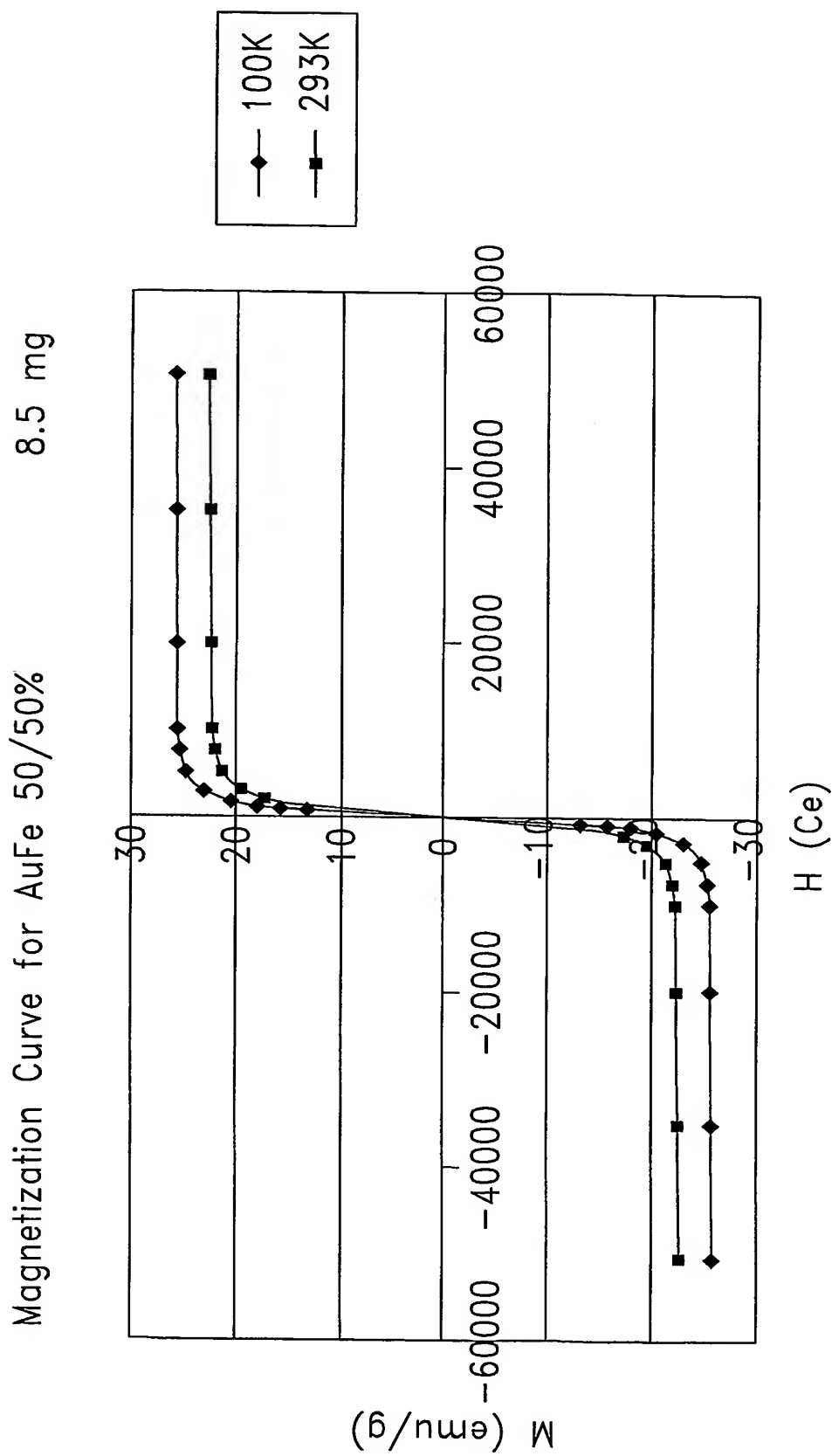
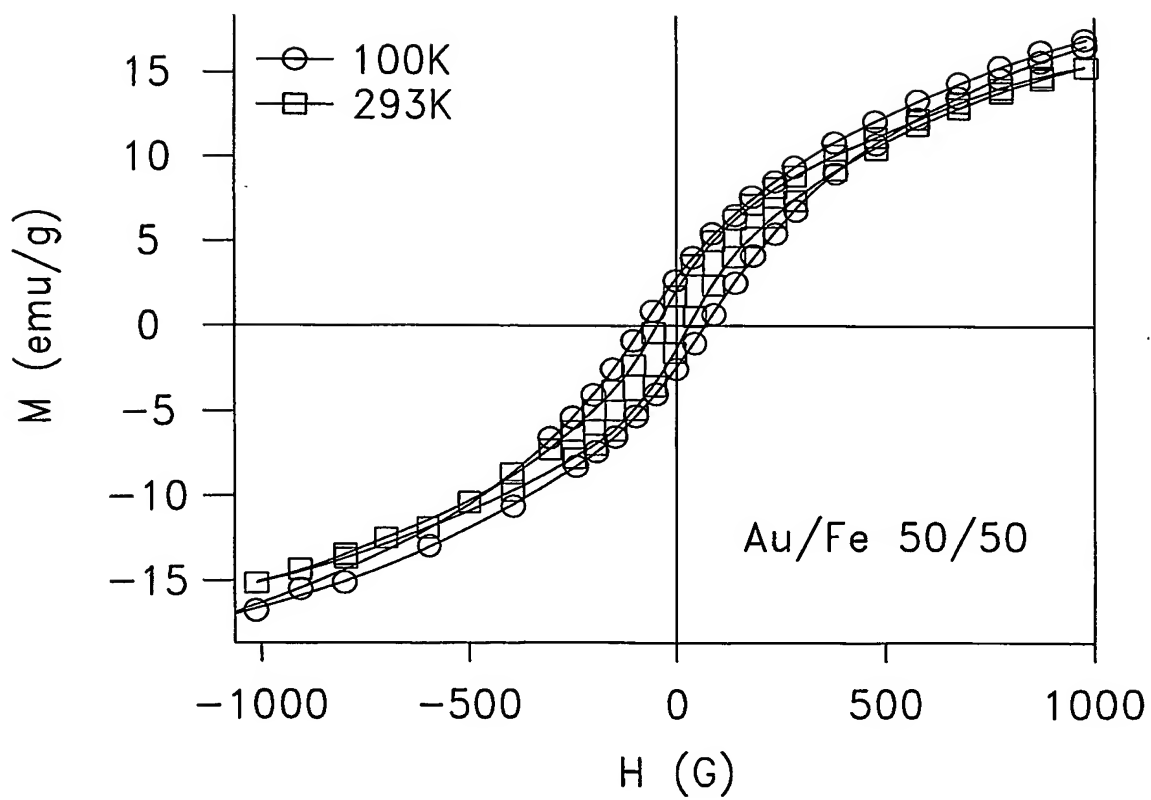


Fig. 5

**Fig. 6a**

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**Fig. 6b**

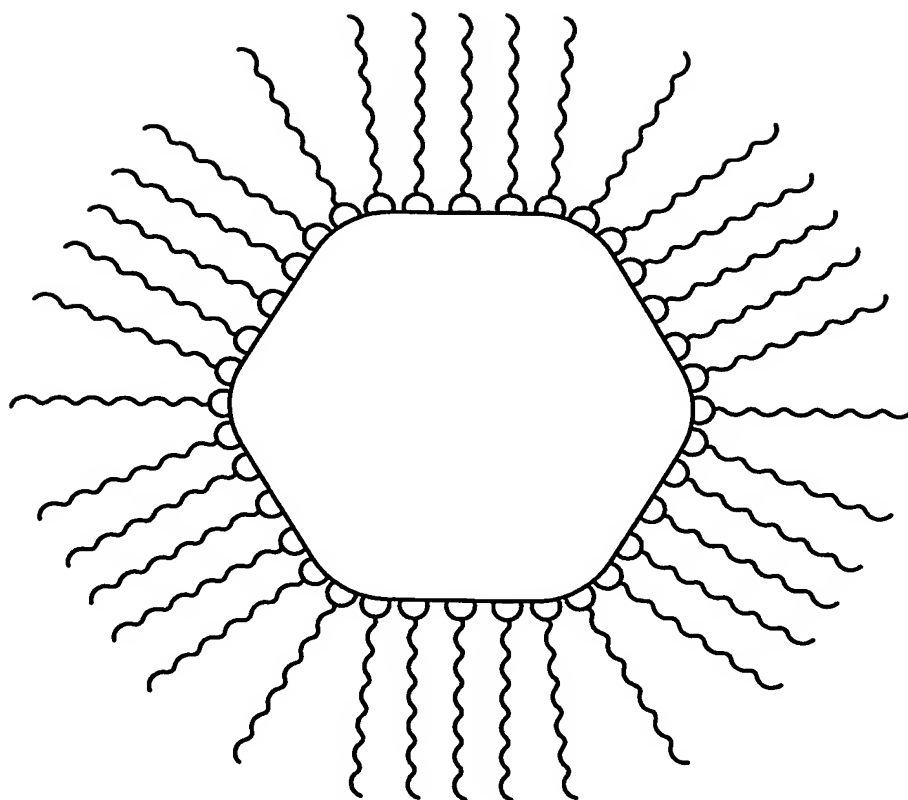


Fig. 7

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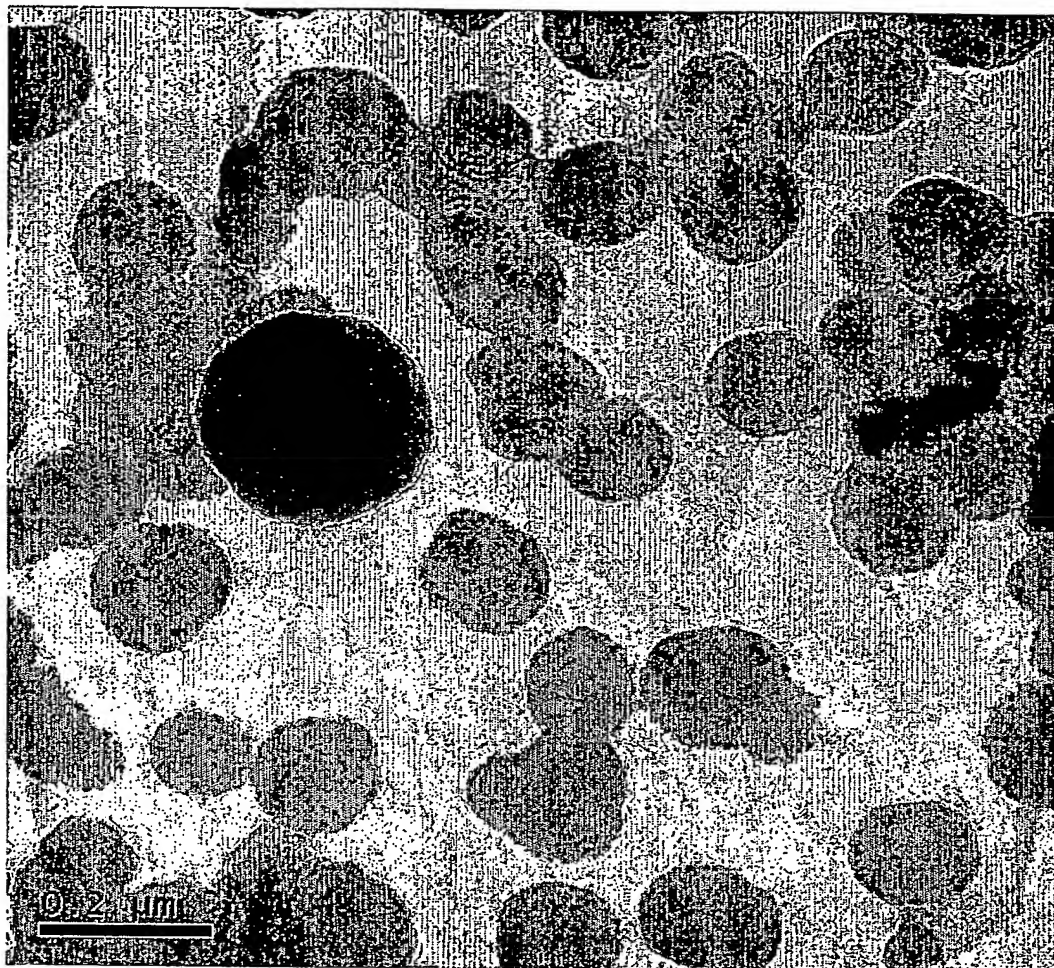
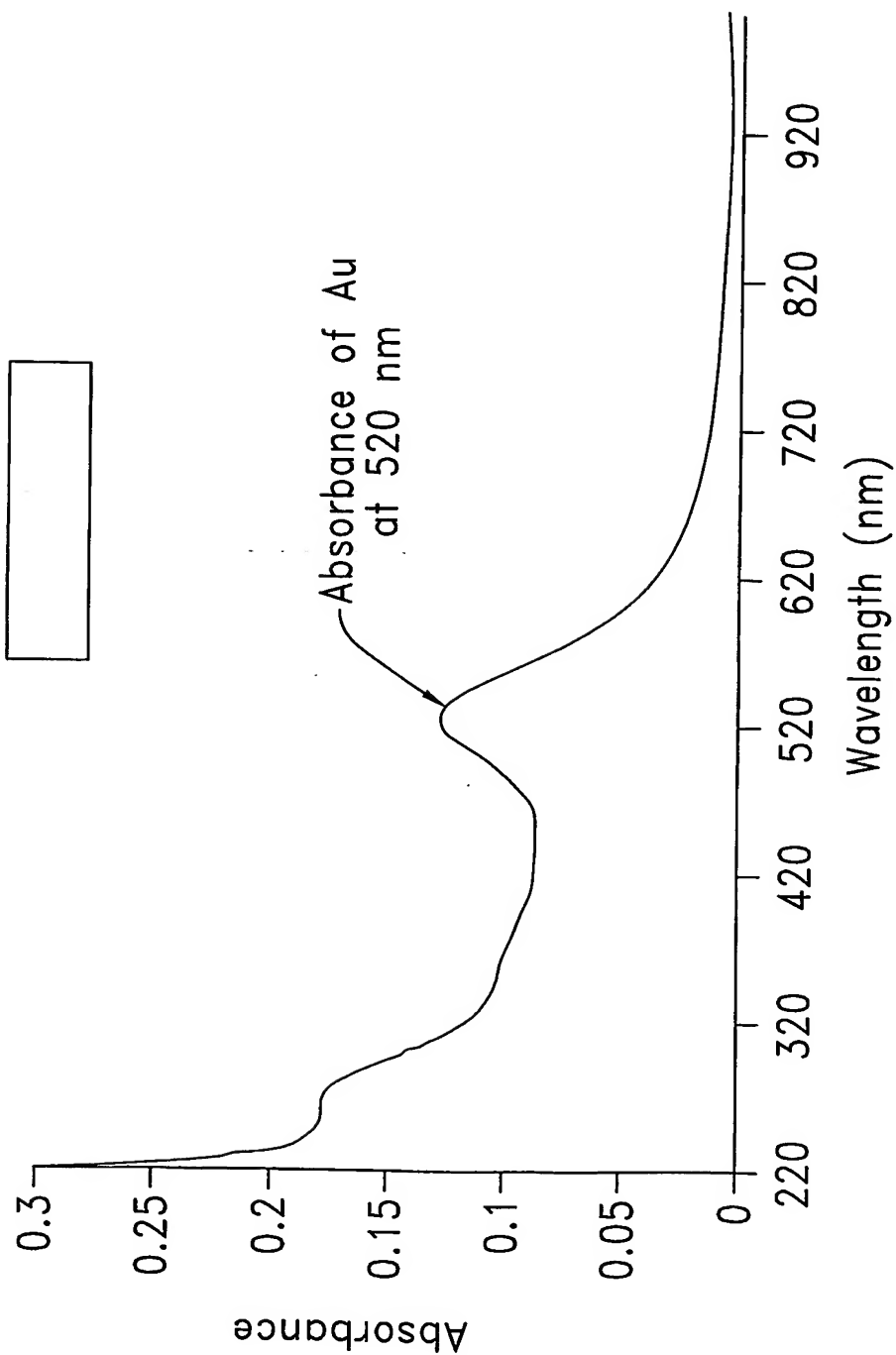


Fig. 8

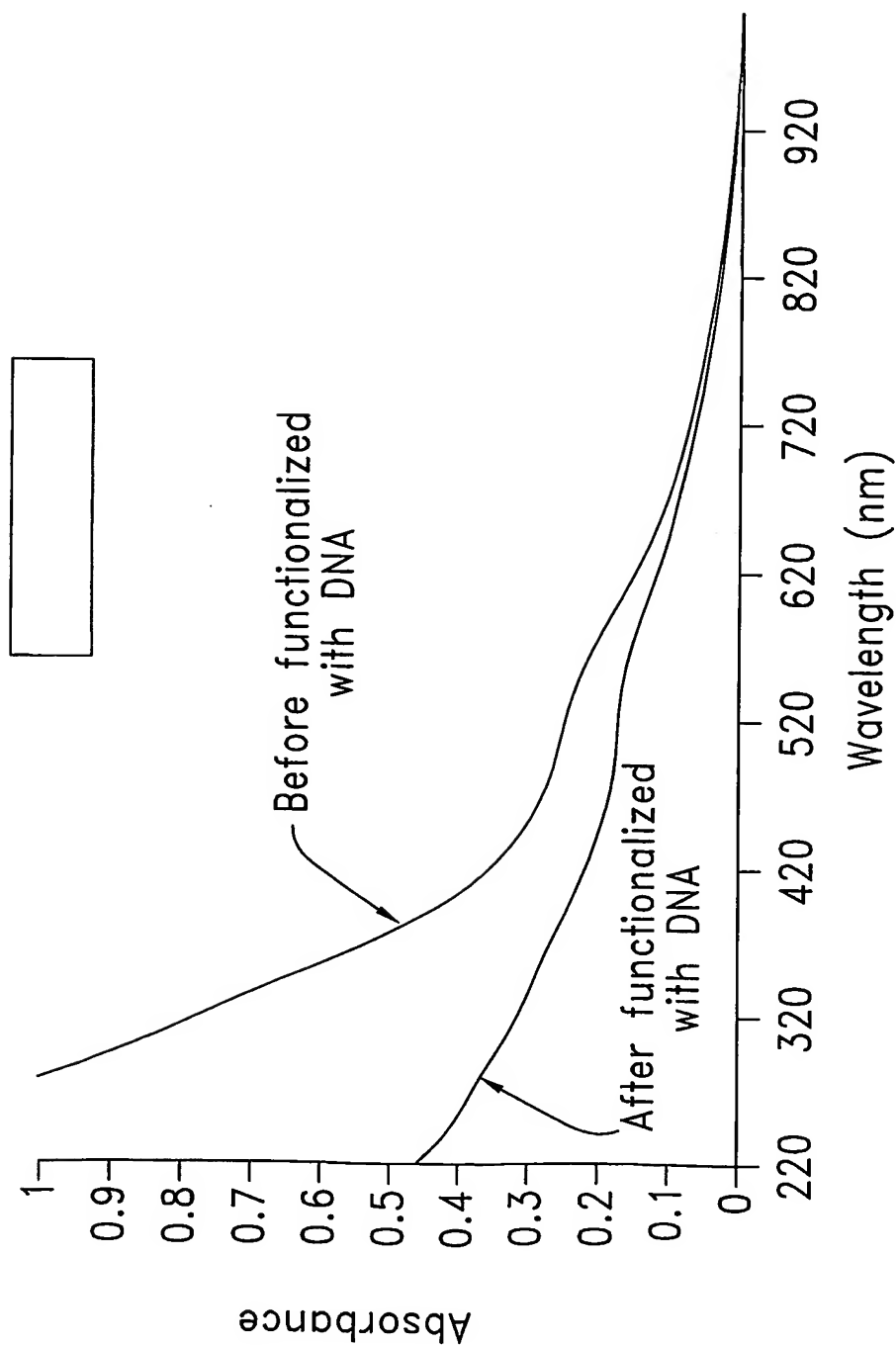
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UV-Vis Spectrum of DNA Functionalized Au Nanoparticles

**Fig. 9**

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UV-Vis Spectra of Fe/Au Nanoparticles

**Fig. 10**

Experimental DNA Hybridization of Functionalized Nanoparticles

WO 2004/003508

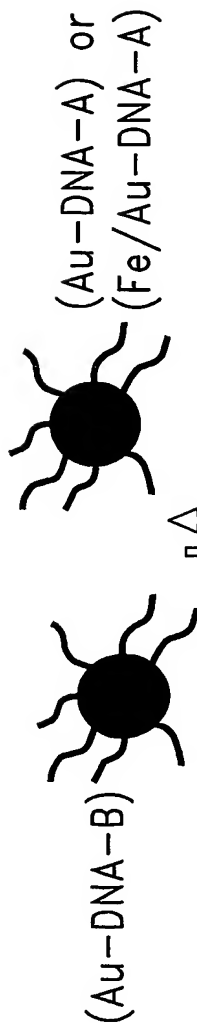
PCT/US2003/020226

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DNA-A: 5'HS-GTC AGT CCG
TCA GTC-3'

DNA-B: 5'ATG CTC AAC
TCT CCG-SH 3'

Step 1:
Functionalization



Step 2:
Hybridization

(DNA-linker/
Target DNA)

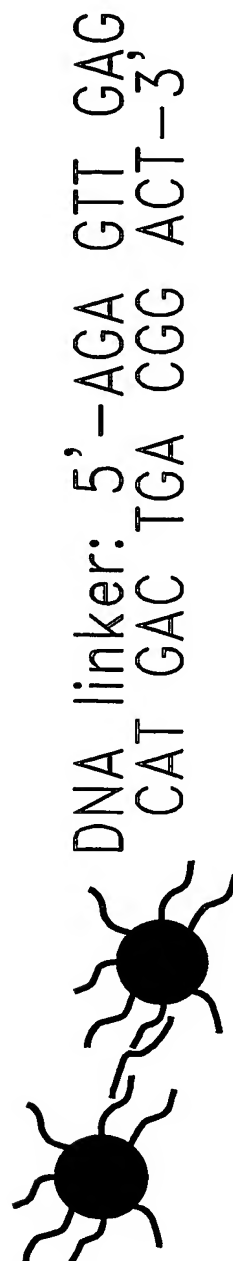
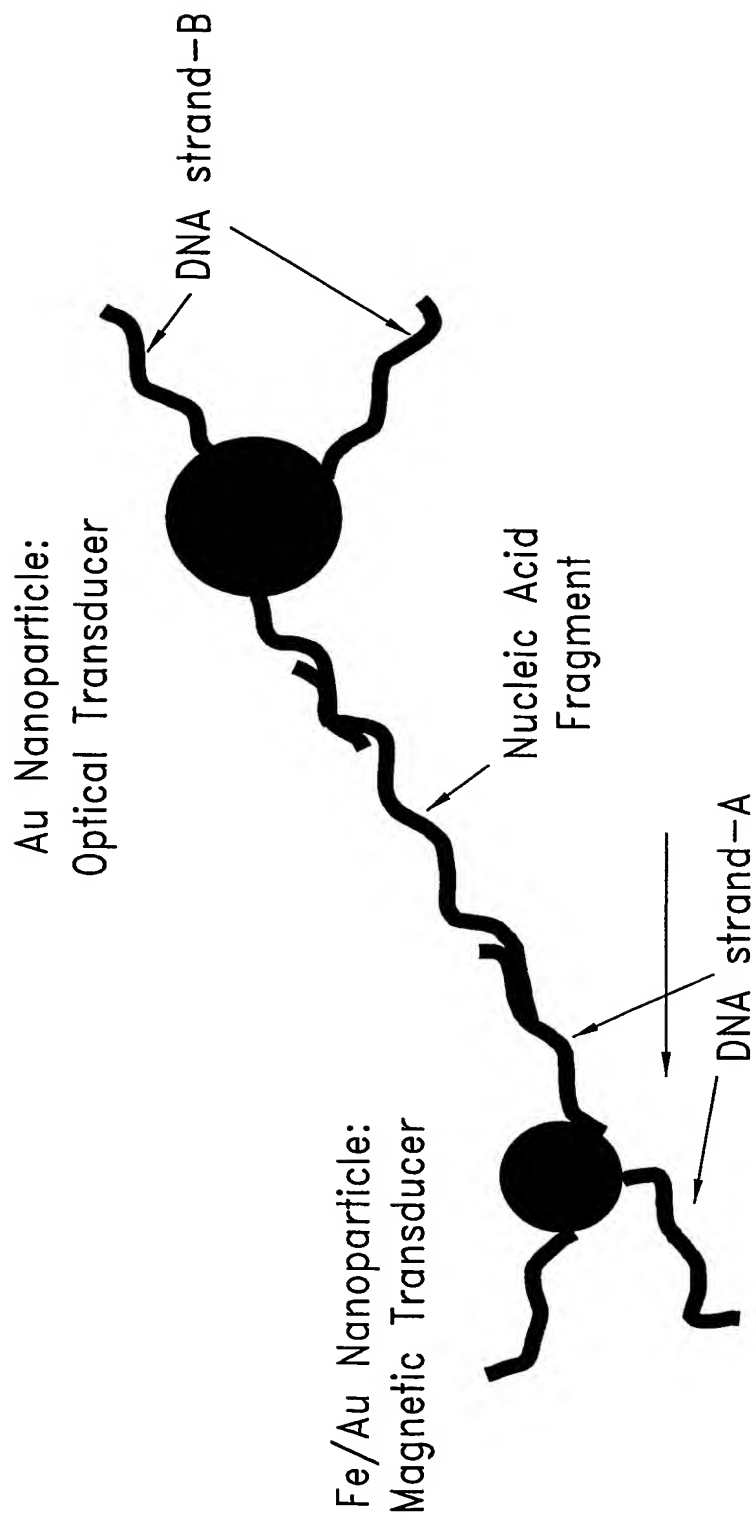


Fig. 11a

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**Fig. 11b**

UV-Vis Spectra of Hybridized
Au:DNA:Au Complexes

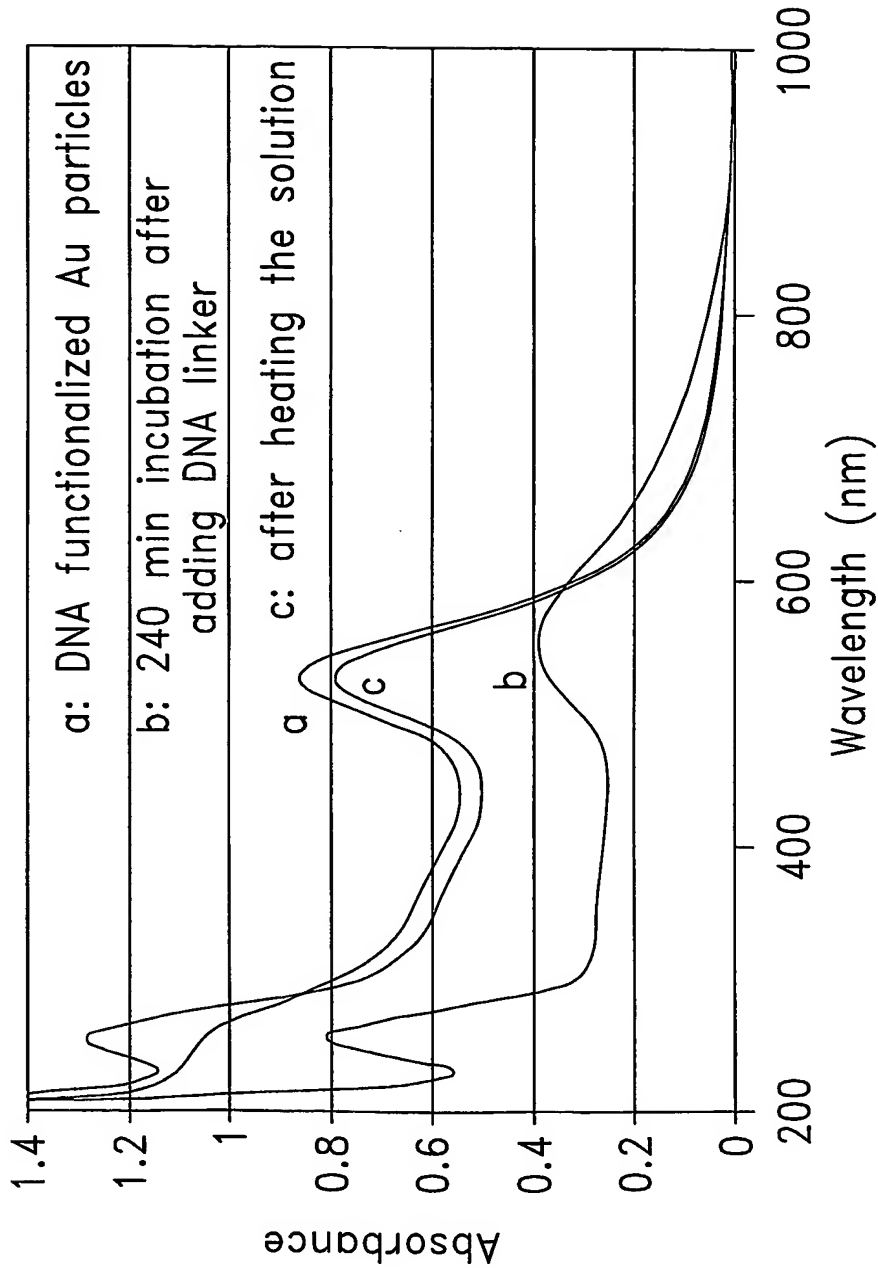
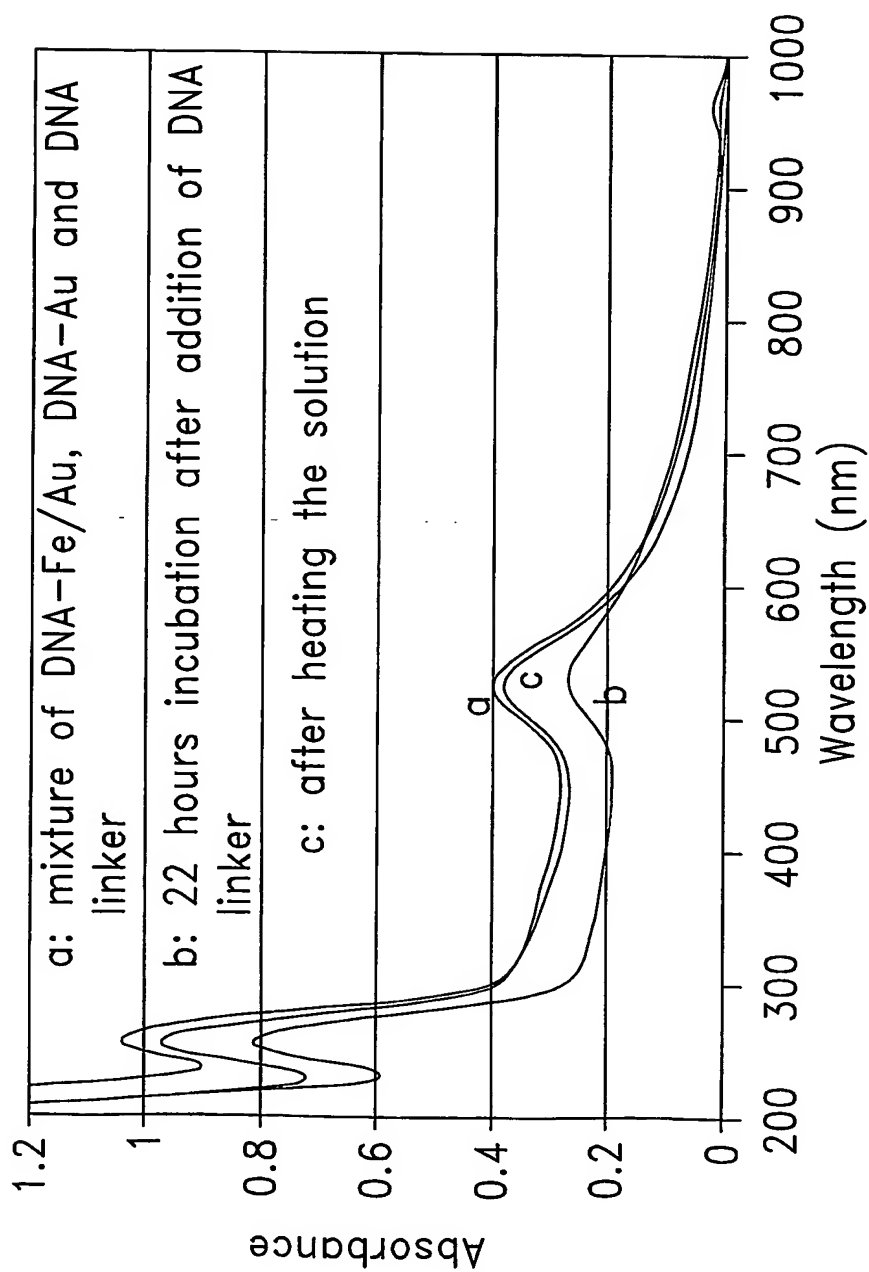


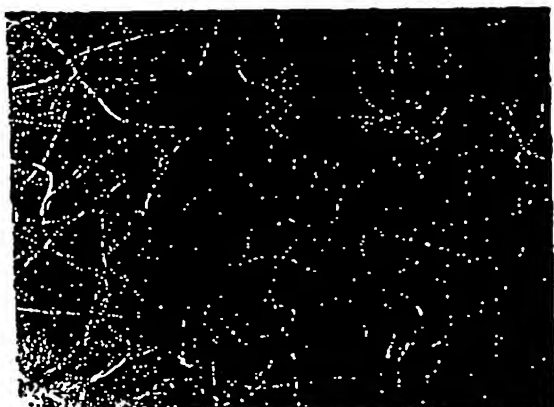
Fig. 12a

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UV-Vis Spectra of Hybridized Fe/Au:DNA:Au Complexes

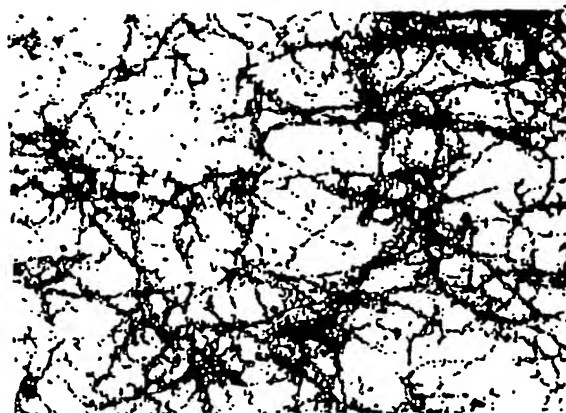
**Fig. 12b**

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A. Phage only

FIG. 13A



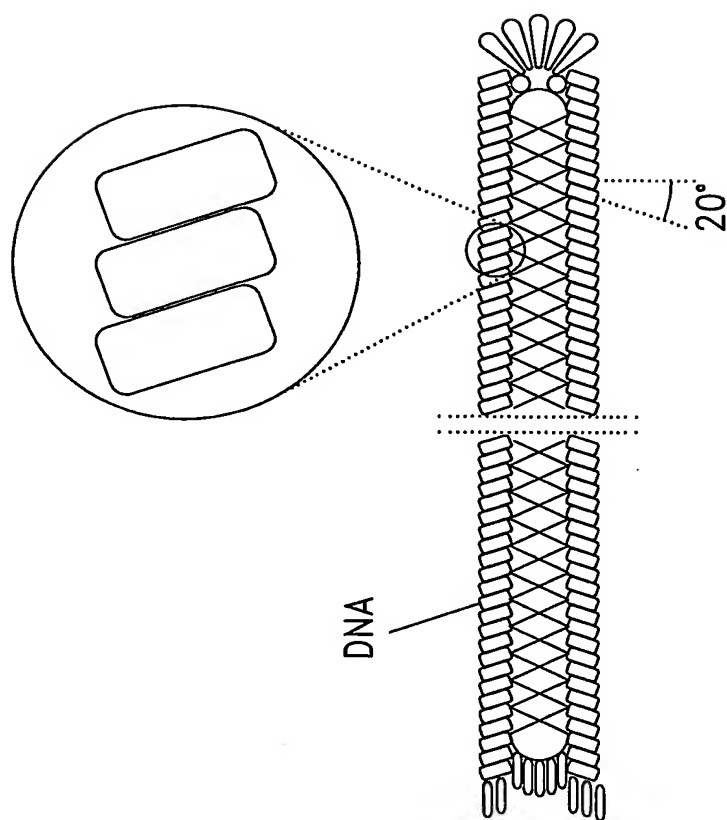
B. Phage + anti M13/Au particles

FIG. 13B



FIG. 13C

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- Anti-M13 conjugated Fe/Au particles (specific, 1:1 ratio)
- Anti-M13 monoclonal conjugated Au particles (attached in the body)

Fig. 14

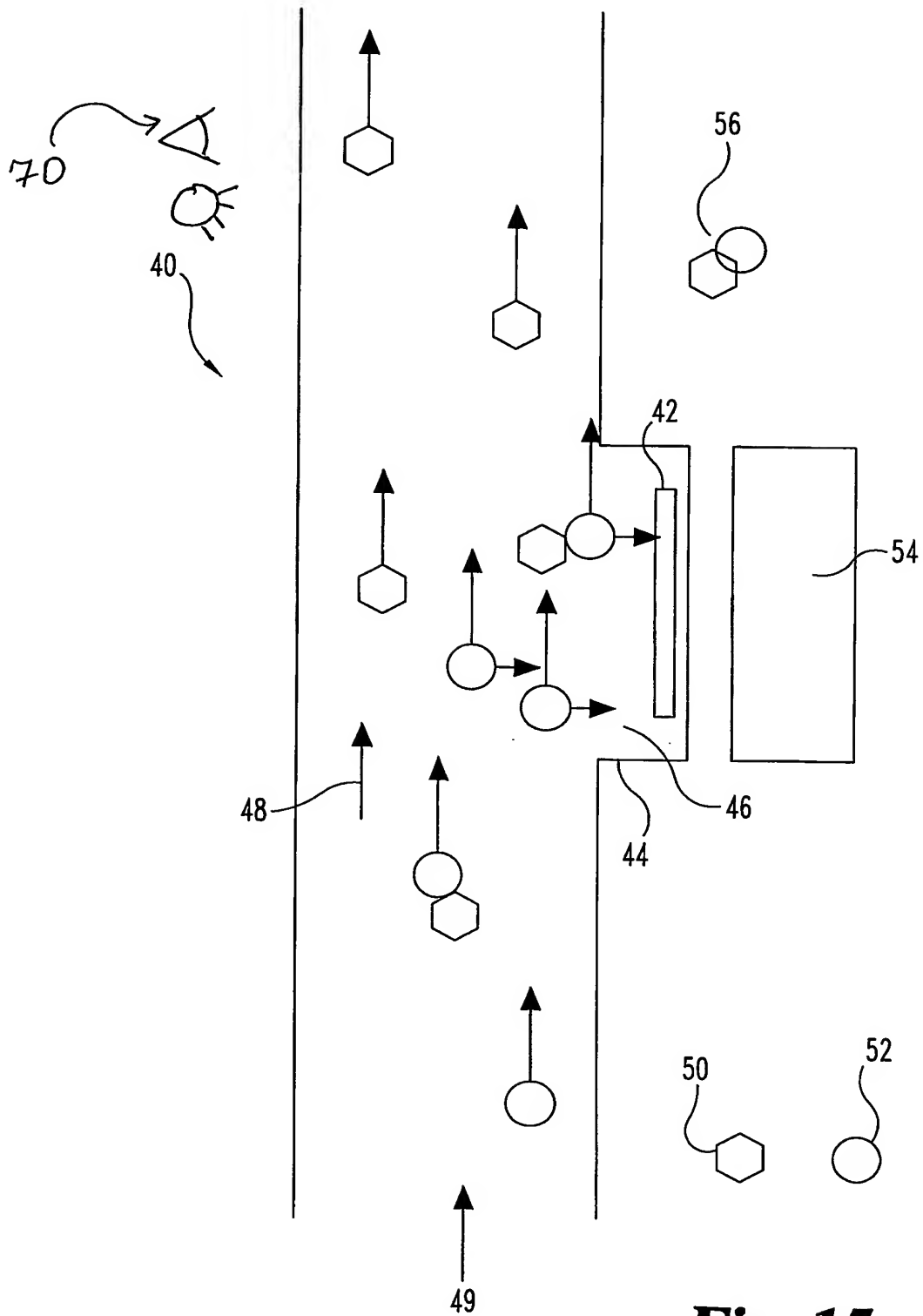


Fig. 15

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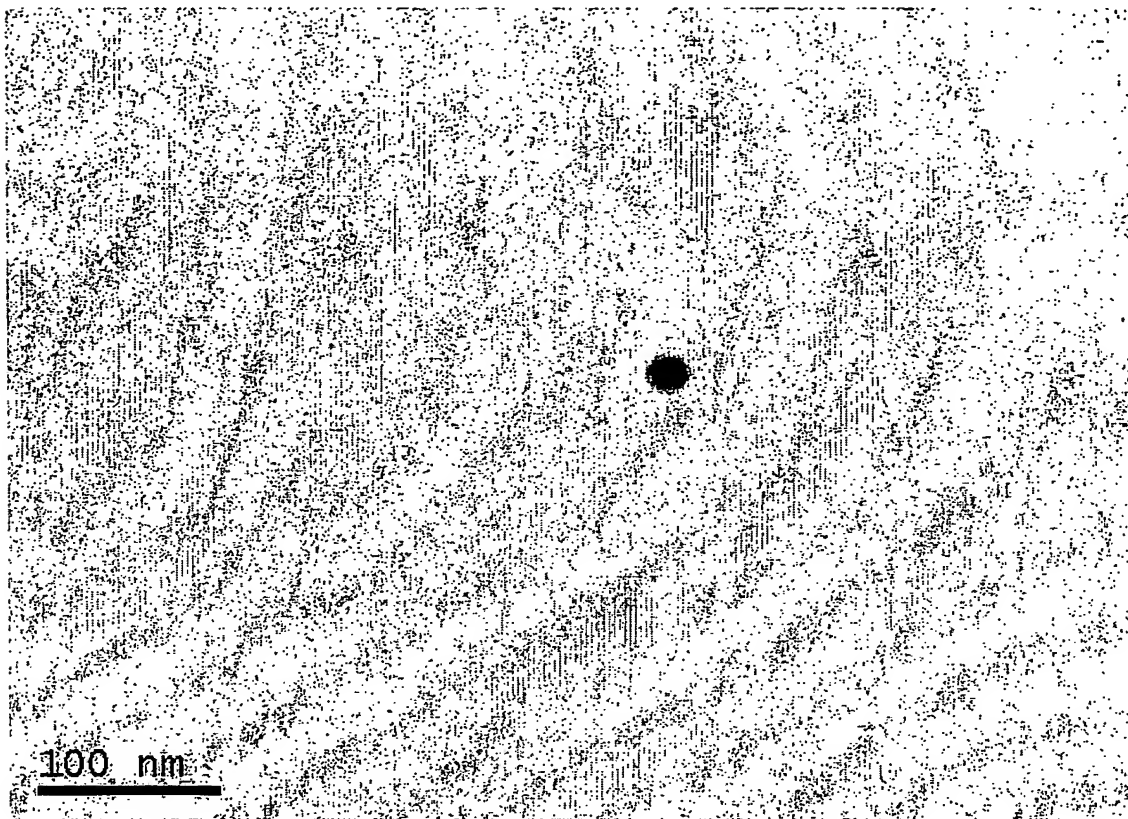


Fig. 16

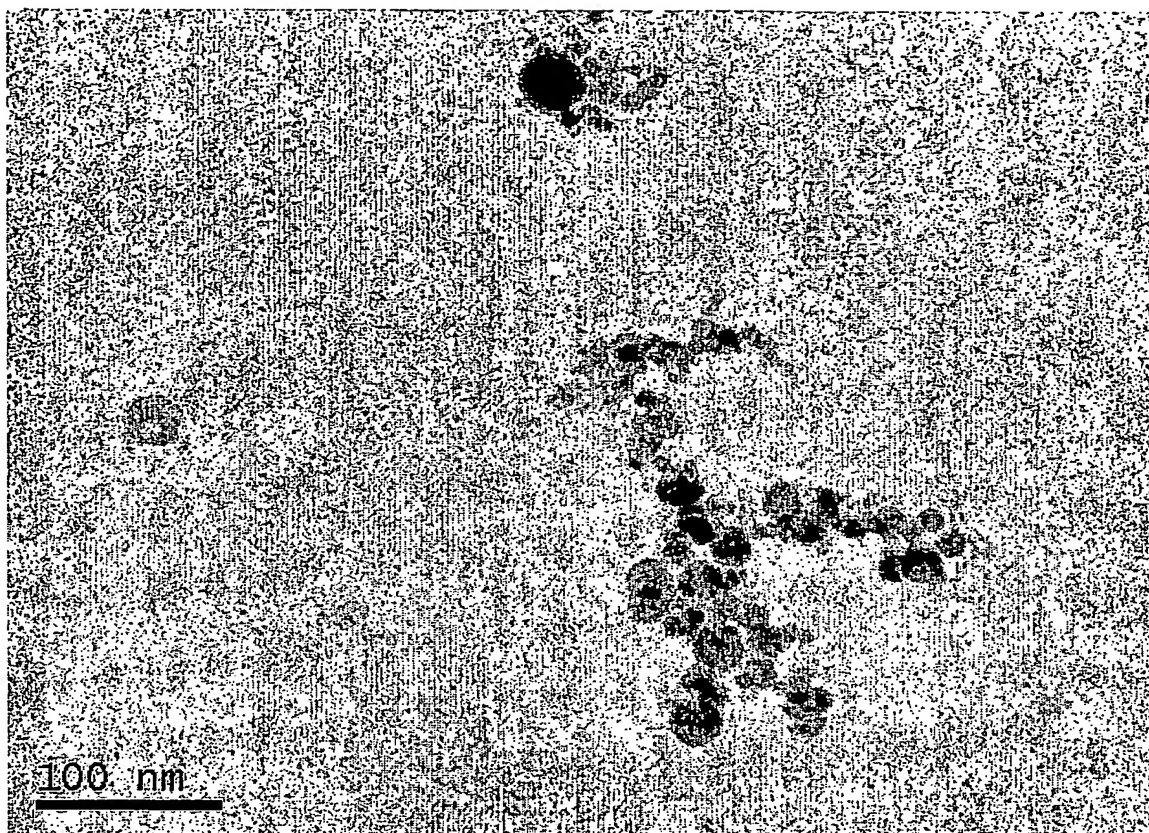
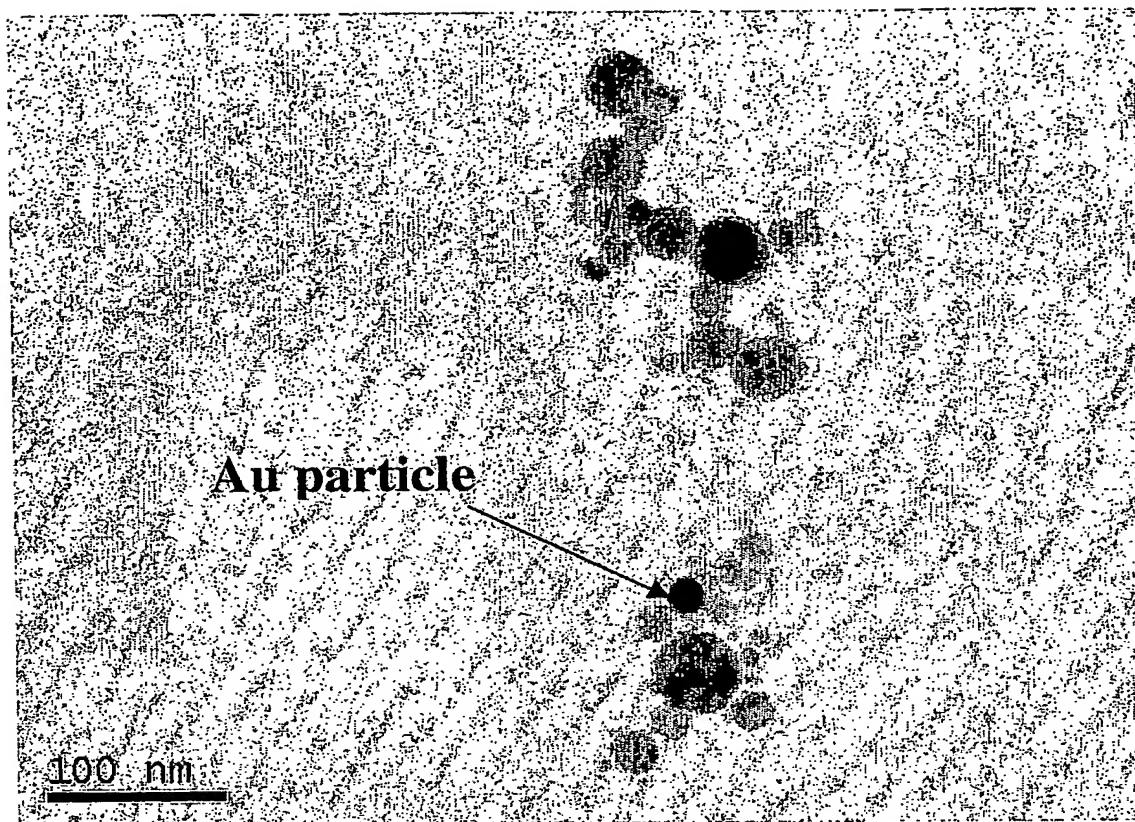


Fig. 17

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*Fig. 18*

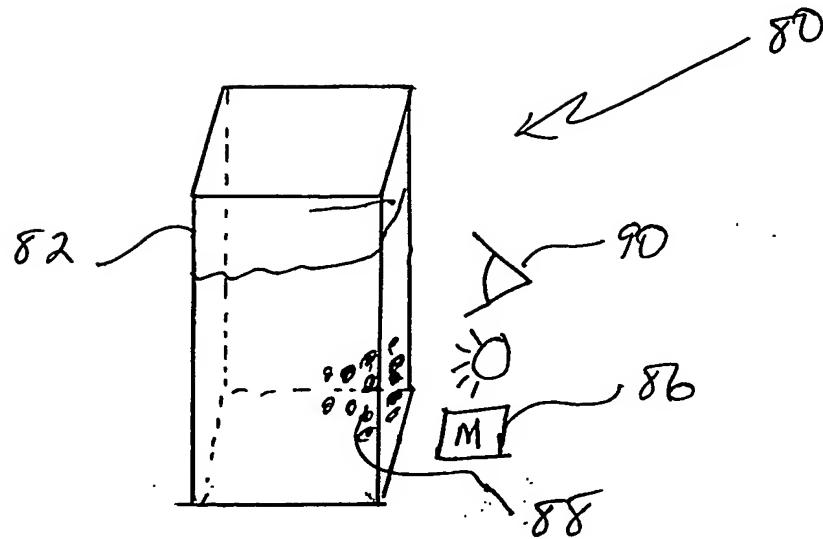


Fig. 19

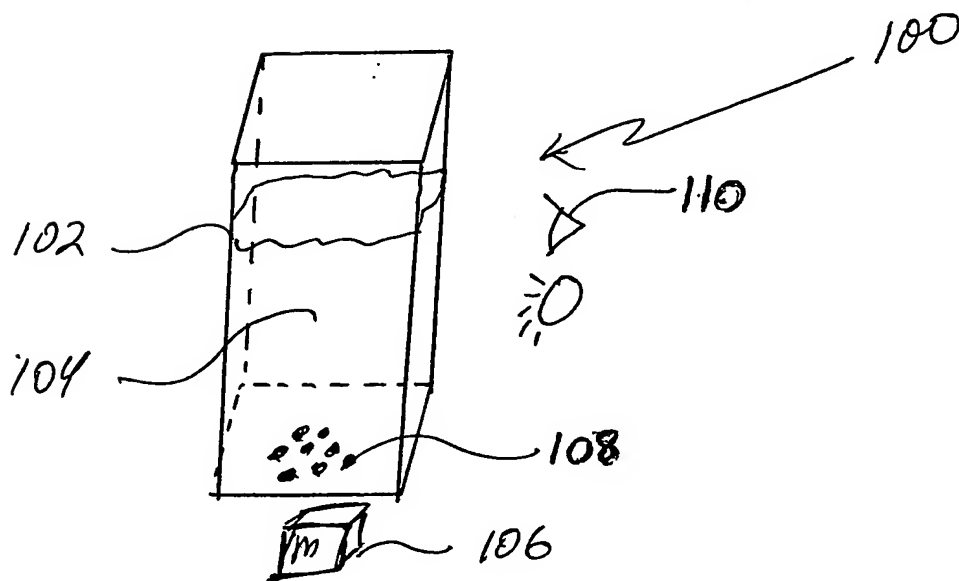


Fig. 20